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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/590,417	06/08/2000	Arthur R. Tilford	PD-990142	9701
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THE DIRECTV GROUP INC PATENT DOCKET ADMINISTRATION RE/R11/A109 P O BOX 956 EL SEGUNDO, CA 90245-0956				BELIVEAU, SCOTTE
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		2614		

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/590,417	TILFORD, ARTHUR R.
	Examiner	Art Unit
	Scott Beliveau	2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 July 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 35-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 35-68 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 June 2000 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 06 July 2004 have been fully considered but they are not persuasive. With respect to applicant's arguments pertaining to the drawing objections of claims 39, 42-45, 48, 52-55, 61, and 64-67 failing to show every feature of the invention specified in the claims , the applicant's arguments appear to merely provide that support is found in the specification for the claimed limitations. However, this does not address the fact that 37 CFR 1.83(a) requires that the drawings must show every feature of the invention specified in the claims. Accordingly, the examiner's objection to the drawings are maintained.
2. With respect to applicant's arguments regarding the rejection of claims 43, 53, and 65 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, the examiner respectfully disagrees. The cited section (IA: Page 12, Lines 23-24) basically states the information is filtered, transmitted to the PDA, and captured. Taken in conjunction with the earlier filtering disclosure (IA: Page 9, Lines 10-14), it is the examiner's understanding that the filtering process is performed solely by the STB wherein the filtered information is subsequently transmitted and stored on the PDA. Accordingly, it is the examiner's interpretation that claim language reciting "wherein [the hand held computing device and] one or more of the STBs are configured to filter out desirable information from the broadcast audio/visual information for transmission and storage on the handheld computing device" would be comply with the written description requirement.

3. Applicant's arguments with respect to claims 35-68 have been considered but are moot in view of the new ground(s) of rejection.

With respect to the rejection of claims 35, 47, and 57 under 35 U.S.C. 103(a) as being unpatentable over Perlman, in view of the PocketTV™ article, and in further view of Huang et al., applicant's arguments have been fully considered but they are not persuasive.

The examiner respectfully disagrees with what is purported to be admitted by the examiner. In particular, it is the examiner's position, as recited in the rejection, that the Perlman reference only fails to displays the particular usage of a handheld computing device or PDA that further acts as a remote controller. In response to applicant's arguments that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the knowledge of interconnecting a set-top box and a handheld computing device such as a PDA was well within the level of ordinary skill at the time the invention was made to those in the art circa the filling of the Perlman reference as evidenced by Figures 1 and 2 of the Wharton et al. reference (of record).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching,

suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Firstly, the Perlman reference explicitly suggests the interconnection of a set-top box [40] with a plurality of “electronic devices” defined as “any number or type of various consumer electronic devices that provide audio output, video output, or information services” (Col 6, Lines 45-60) of which would include devices including “handheld computing devices” or PDAs as described in the PocketTV™ article. As is understood in the art, a WebTV® terminal is both a computing device and a set-top box. Accordingly, the particular interconnection with a handheld computing device is suggested/envisioned by the Perlman reference. Secondly, the Perlman reference discloses an exemplary usage of a VCR. As has been previously held, a change in size is generally recognized as being within the level of ordinary skill in the art (*In re Rose*, 105 USPQ 237 (CCPA 1955)) and making an old device portable or movable without producing any new and unexpected result involves only routine skill in the art (*In re Lindberg*, 93 USPQ 23 (CCPA 1952)). The PocketTV article provides a physical actualization of what has been previously been held as an obvious variant of the Perlman VCR in disclosing software that enables a PDA to become a miniature VCR that is inherently capable of transmitting information between it and a computer. Arguments to the contrary that the HP Jordana™ 430se PDA is incapable of transferring video files both to and from the device are not persuasive for the video file clearly needed to be transmitted to the PDA for playback, the device inherently supports the transfer of files to/from the PDA as evidenced by the HP User Guide, it is commonly known in the art that VCR-type devices

transmit video files for subsequent display, and the analogous sharing of video files between VCR users is known in the art as described in applicant's background (IA: Page 2, Lines 3-12). Accordingly, the usage of the PocketTV™ software advantageously provides users of the Perlman system with a portable VCR that facilitates among other things the portable storage and playback of an entire movie. Similar to the transfer of information to a traditional VCR the video may be further presented on the larger display of Perlman given its ability to interconnect and display video information deriving from the interconnected devices. The grounds of rejection are subsequently modified so as to further reflect the implicit commonly known advantages associated with such a combination associated with the ability for a handheld computing device such as a PDA to display stored information on a subsequent larger screen.

Applicant's arguments that a "set-top box" is a term of art such that the HP Jordana™ is limited to communication between it and a standard PC are similarly not persuasive as the HP Jordana™ User Guide does not preclude its usage with any form of standard PC. As evidenced by the Schindler et al. reference, the lines between what constitutes a "set-top box" and a PC were clearly blurred in the art circa 1995. Accordingly, taken in combination with the Perlman system and suggestion of the usage of it with any consumer electronic device, it is the examiner's position that the devices would be interoperable.

With respect to the rejection of claims 47 and 48 under 35 U.S.C. 103(a) as being unpatentable over either Perlman or Schindler et al., in view of the PocketTV™ article, and in further view of Huang et al. applicant's arguments have been fully considered but they are not persuasive. As previously noted, in response to the examiner's previous objection

pertaining to the drawings failing to illustrate such a scenario utilizing multiple “handheld computing devices” in conjunction with a single “set top box”, the applicant stated that such a scenario is a “conventional feature” and as such need not be shown in the Figures (Paper 10, Page 7). The MPEP equates an admission of conventional features as those features being generally widely known in the field of the invention described. Accordingly, per applicant’s statement, the particular usage scenarios are deemed to be knowledge which was within the level of ordinary skill at the time the claimed invention was made and thereby an obvious variant for the purpose of exchanging stored media between users.

With respect to the rejection of claims 36, 37, 58, and 59 under 35 U.S.C. 103(a) as being unpatentable over Perlman, in view of the PocketTV™ article, and in further view of Huang et al., applicant's arguments have been fully considered but they are not persuasive.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, as aforementioned, so long as reconstruction takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). It is the examiner's position that the ability to playback recorded media for two users with identical configurations and to share recorded media between devices was within the level of ordinary skill at the time the claimed invention was made. For example, applicant's description of the related art describes the particular ability for the playback of recorded media as well as the transfer of such media between similar configurations (IA: Page 2, Lines 3-12). Furthermore, the particular ability to transfer and

display stored video from a small screen display device to a larger screen for the enjoyment of others and enhanced visual resolution was commonly known and within the level of ordinary skill in the art (ex. Croy et al.: Col 9, Lines 27-31; Minett: Col 2, Lines 37-51).

With respect to the rejection of claims 35, 47, and 57 under 35 U.S.C. 103(a) as being unpatentable over Schindler et al., in view of the PocketTV™ article, and in further view of Huang et al., applicant's arguments have been fully considered but they are not persuasive.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, the examiner respectfully disagrees. The Schindler et al. system explicitly comprises a personal computer that also serves as a set-top box which receives and displays MPEG1 encoded video files on a large display. Applicant has previously admitted that the PocketTV™ and Jornada reference are limited to the transmission of information to and from a computer (Paper 18, Page 9, Lines 7-10). Furthermore, the transfer of information from a smaller display of a PDA to a larger display device is commonly understood in the art for the improved visibility circa at least as earlier as 1996 and the Schindler et al. system is clearly operable to display MPEG1 encoded files on its larger display. Accordingly, applicant's arguments pertaining to improper hindsight are not persuasive, in view of the references taken in combination and in conjunction with commonly known features including the playback of information from a small screen handheld computing device such as a PDA to a subsequent larger screen.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations “wherein the audio/visual information is stored in encrypted form” (Claims 39 and 61), the limitation “wherein the handheld computing device is further configured to control a video cassette recorder that is incorporated into one or more of the STBs” (Claims 42, 52, and 64), the limitation “wherein the hand held computing device and one or more of the STBs are configured to filter out desirable information from the broadcast audio/visual information from the broadcast audio/visual information for transmission and storage on the hand held computing device” (Claims 43, 53, and 65), the limitation “wherein the audio/visual information is transmitted from one of the STBs to the handheld computing device over a constant periodic interval” (Claims 44, 54, and 66), the limitation wherein “the audio/visual information is transmitted from one of the STBs to the handheld computing device only when an amount of the audio/visual information exceeds a threshold” (Claims 45, 55, and 67), and the limitation “wherein the first handheld computing device and the second handheld computing device are different handheld computing devices” (Claim 48) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 43, 53, and 65 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the specification only discloses that the STB is configured to filter out desirable information (IA: Page 9, Lines 10-14) as opposed to both the “hand held computing device and one or more of the STBs”.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 35-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman (US Pat No. 6,169,879), in view of the PocketTV™ article, and in further view of Huang et al. (US Pat No. 6,437,836).

In consideration of claim 35, the Perlman et al. reference discloses a method, system, and article of manufacture for facilitating communications between a WebTV “set top box” [40] and a plurality of “electronic devices” defined as “any number or type of various consumer electronic devices that provide audio output, video output, or information services” (Col 6,

Lines 45-60). The system implicitly comprises “two or more set top boxes (STBs)” [40] or WebTV boxes (Col 8, Lines 12-15) associated with a given user’s home entertainment system for “controlling a display of audio/visual information” [110]. A WebTV, as defined in the Microsoft Computer Dictionary 5th Edition, is a “system that provides consumers with the ability to access the Web as well as send and receive e-mail on a television by means of a set-top box equipped with a modem”.

The reference discloses that the “set top box” [40] is operable to “receive broadcast audio/visual information” (Col 7, Line 66 – Col 8, Line 4) and “receive” / “transmit audio/video information” from/to any of the connected sources such as a VCR [130] whereupon it is “transformed . . . to a form suitable for presentation on an output device” for “display on the output device” [110] (Col 9, Lines 23-30, 46-65). The reference, however, does not explicitly disclose nor preclude that the aforementioned interconnected “electronic devices” would not further include a “handheld computing device” such as one that provides audio output, video output, or information services. The “PocketTV Brings Video to Palm-size PC” article discloses a “handheld computing device” such as a PDA (ex. HP Jornada 430se) that further provides audio and video output in a manner such that it “becomes a miniature VCR” and further inherently supports the ability to “transmit” and “receive” video files to a computer, as further evidenced by the “HP Jornada 430/430se Palm-size PC User’s Guide” of record. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a “handheld computing device” as disclosed in the PocketTV™ article in conjunction with the “set top box” [40] interconnection teachings of Perlman for the purposes of enabling the recording/storage of “audio/visual information” on

a portable device that may advantageously allow for the storage of an entire movie in your pocket (PocketTV™ article) in a portable manner. Furthermore, such a combination would implicitly provide a means for presenting such information using a larger display screen [110] analogous to the Perlman VCR arrangement for the commonly known advantage of providing the “handheld computing device” or PDA user with a more easily viewable image when the PDA is interconnected to the “set top box” [40] based upon a higher screen size and resolution (HP Jornada 430se provides a maximum of 16-bit video or 65,336 colors) and/or enabling easier viewing for additional/multiple user so as to share viewing the recorded content given the larger screen image.

Taken in combination, the combined teachings disclose a “set top box” [40] that facilitates the distribution of audio/visual information to, from, and between a plurality of interconnected electronic devices including “handheld computing device” for display on the “output device” [110]. However, the reference does not explicitly disclose nor preclude that the “handheld computing device” is further configured to facilitate remote control type functions. The Huang et al. reference discloses the particular usage of a “handheld computing device” or PDA that is operable to “receive a user command from a user” and “translate the user command into a command signal” so as to “control one or more of the STBs using the command signal” (Col 6, Lines 16-31; Col 7, Lines 43-58). Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the “handheld computing device” of the combined teachings for the purpose of utilizing a PDA as a platform for a remote control that advantageously facilitates added flexibility and functionality (Huang et al.: Col 3, Line 51 – Col 4, Line 21).

Claims 47 and 48 are rejected as previous set forth in the rejection of claim 35. The aforementioned combined references do not explicitly disclose the particularly claimed scenario wherein a “first of one or more hand held computing devices” is operable to interact with a STB (Claim 47) such that “the first hand held computing device and second hand held computing device are different hand held computing devices”. In response to the examiner’s previous objection pertaining to the drawings failing to illustrate such a scenario utilizing multiple “handheld computing devices” in conjunction with a single “set top box”, the applicant states that such a scenario is a “conventional feature” and as such need not be shown in the Figures (Paper 10, Page 7). Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the invention that the aforementioned combined teachings of Perlman would be operable to utilize both a “first” and a “second handheld computing device” that are different for the purposes of enabling a viewer to transport and share media with another user with a similar configuration.

Alternatively, it is well known in the art that viewers desire to share recorded media for a number of reasons. The combined Perlman and PocketTV™ articles suggest the use of a portable “handheld computing device” in which a viewer may take recorded media along with them. One of ordinary skill in the art would recognize that multiple home entertainment systems of the combined references may exist and meet the claimed limitations wherein the “first” and “second handheld computing devices” are “different”. Feasibly a viewer with a “first hand held computing device” may “receive audio/visual information” that is “transmitted” to a “first handheld computing device” and “stored”. The viewer’s friend may own a “second handheld computing device” that “receives” and “stores” a different program.

Over afternoon tea, the second viewer may talk about the program that he/she watched last night. Presuming that the first viewer has not viewed the program, the second viewer having ordinary skill in the art and being a polite conversationalist may offer to share the contents of the “second handheld computing device”. One having ordinary skill in the art would subsequently recognize that it would be advantageous to plug the “second handheld computing device” into the first user's home entertainment system such that it “receives” and “provides the audio/visual information from the second hand held computing device” to an “output device” [110] such as a television set for the purpose of advantageously providing the video display on a larger screen that is easier to view so as to share the program with the second user.

In consideration of claim 57, as aforementioned, the combined teachings disclose a “handled computing device” such as a PDA that is implicitly operable to “control two or more set top boxes” of similar configuration. As aforementioned, the “handheld computing device”, in light of the combined references, is operable to “receive audio/visual information from a first STB”, “store the received audio/visual information” and subsequently transmit the “stored audio/visual information to a second STB for display on the output device”.

In consideration of claims 36, 37, 58, and 59, it is known in the art that viewers share recorded media. The combined disclose the use of a portable “handheld computing device” in which a viewer may take recorded media along with them. Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to recognize various usage scenarios for the purpose of sharing and distributing media between users with a similar configuration of home entertainment systems. For example, one of

ordinary skill in the art would recognize that given multiple home entertainment systems that a user might record information on their “handheld computer device” for storage and playback on the “same” STB for the purpose of presenting such information using a larger display screen that advantageously provides a higher screen image resolution than that associated with the PDA (HP Jornada 430se provides a maximum of 16-bit video or 65,336 colors) and/or enables easier viewing for additional/multiple user so as to share viewing the recorded content given the larger screen image. Alternatively, the use of the “same” STB provides the user with the ability to record and advantageously watch the program at a later time. Similarly, in conjunction with the sharing of media, a user of a “handheld computer device” may subsequently share or distribute the media to a “different” STB associated with a friend for the purposes of advantageously enabling the sharing (analogous to sharing a traditional VCR tape) and viewing of the recorded media on a larger display screen associated with a different location.

In consideration of claims 38, 49, and 60, it is notoriously well known in the art to for a VCR to “transmit the audio/visual information . . . in response to the depressing of a signal button” such as the play button. As aforementioned, the Perlman reference discloses that the VCR [130] is operable to “transmit the audio/visual information” to a “set top box” [40]. Accordingly, given that the suggestion by PocketTV™ article that the PocketTV™ is a “miniature VCR”, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a “user command” such as that associated with a play button similar to other VCRs in the art for the purpose of providing a means for “transmitting audio/visual

information” to the “second STB” [40] for display on the “output device” [110] using an interface with which a user of a VCR is familiar.

In consideration of claims 39 and 61, it would have been obvious to one having ordinary skill in the art at the time of the invention to store the audio/visual information on the “handheld computing device in encrypted form” for the purpose of limiting the distribution and subsequent playback of the record media to individuals per the media terms of use.

In consideration of claims 40, 41, 50, 51, 62, and 66, the Perlman reference discloses that the embodiment is operable to support a means for electrically connecting each of the consumer electronic devices to the central device in a hub and spoke configuration (Col 14, LInes 31-33) and may further reformat signals between various formats (Col 16, LInes 12-23). The Huang et al. reference discloses the particular usage of “wireless transmission” to communicate with the “one or more of the STBs” (Col 5, Lines 15-21). A PDA such as the HP Jordana 430/430se is operable to communicate via both “wireless” and “wired” means. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further utilize “wired” means in conjunction with “communications” with the “one or more STBs” associated with audio/video materials for the purpose of utilizing a distribution method that supports a higher data transfer rate needed to support streaming video.

In consideration of claims 42, 52, and 64, the Huang et al. embodiment is “configured to control a video cassette recorder” (Col 5, Lines 22-30). The Perlman reference, however, does not explicitly disclose nor preclude that the “set top box” [40] further comprises an “incorporated” video cassette recorder. Rather, the video cassette recorder [130] is illustrated

as a separate unit. However, Perlman explicitly incorporates by reference the Perlman (US Pat No. 6,530,085) reference (Col 1, Lines 7-10). The Perlman ('085) reference discloses that the "set top box" [40] may comprise an "incorporated" video cassette recorder (Col 19, Lines 46-64). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention that the VCR [130] referenced in conjunction with the Perlman ('879) reference may be either external or internal to the "set top box" [40].

In consideration of claims 43, 53, and 65, the combined references do not explicitly disclose the particular technique for "filtering out desirable information from the broadcast audio/visual information for transmission and storage on the handheld computing device". As referenced in the PocketTV article, a Palm sized device may comprise 64 MB of memory that is operable to store more than one hour of audio/visual information (Para. 2). Accordingly, it would have been obvious to one having ordinary skill in the art to "filter out desirable information from the broadcast audio/visual information" do so for the purpose of utilizing the limited storage capacity to store "desired" material as opposed to undesirable material.

In consideration of claims 44, 54, and 66, the combined references do not explicitly disclose that the "audio/visual information" is transmitted over a "constant period interval". It would have been obvious to one having ordinary skill in the art at the time the invention was made to transmit information over a "constant periodic interval" since it was known in the art that data such as wireless streamed video is transmitted at a "constant periodic interval" of 100 Mbit/sec or higher per the PocketTV article. Furthermore, the IrDA compliant transceivers such as that associated with the HP Jornada 430/430se transmit

information at a “constant period interval” from 9600 b/s with primary speed/cost steps of 115 kb/s and maximum speed up to 4 Mb/s.

In consideration of claims 45, 55, and 67, the “audio/visual information” is “transmitted from one of the STBs to the handheld computing device only when an amount of the audio/visual information exceeds a threshold” such that information is only transmitted when information is available. Alternatively, given that the embodiment is operable to communicate via both “wireless” and “wired” means, it would have been obvious to one having ordinary skill in the art that information would be transmitted via the “wired” means if the data transfer rate exceeds 100 Mbit/sec since such a transfer rate is not supported in conjunction with wireless distribution as taught by the PocketTV article.

In consideration of claims 46, 56, and 68, as aforementioned audio/visual information may be “transmitted” from one of the “handheld computing devices” or electronic devices to the STB [40] (Perlman ('879): Col 9, Lines 46-54). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to “transmit” the “audio/visual information . . . from one of the STBs to the handheld computing device when requested by the handheld computing device” for the purpose of providing a means by which the user may control and specify the particular information to be stored on the “handheld computing device”.

9. Claims 35-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schindler et al. (US Pat No. 5,675,390), in view of the PocketTV™ article, and in further view of Huang et al. (US Pat No. 6,437,836).

In consideration of claim 35, the Schindler et al. reference discloses a method, system, and article of manufacture for facilitating communications between a computer / “set top box” [118] and a plurality of “electronic devices” (Figure 1). In light of the applicant’s specification, a “set top box” is disclosed as any device capable of receiving program information signals (IA: Page 10, Lines 23-25). The reference discloses that the “set top box” [118] is operable to “receive broadcast audio/visual information” including MPEG-1 encoded signals and to “receive” / “transmit audio/video information” from/to a connected sources such as a VCR [172] whereupon it is “transformed . . . to a form suitable for presentation on an output device” for “display on the output device” [122] (Col 7, Line 44 – Col 8, Line 65). The reference, however, does not explicitly disclose the particular usage of a “handheld computing device” to be used in conjunction with the embodiment for the receiving and transmitting material to/for a computer. The PocketTV™ article, as interpreted by the applicant (Paper 18, Page 9, Lines 7-10), discloses a device or PDA that is limited to receiving and transmitting material to/from a computer. As referenced in the article, such information comprises MPEG-1 encoded video. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a “handheld computing device” as disclosed in the PocketTV™ article in conjunction with the computer / “set top box” [118] of Schindler et al. which facilitates the storage and processing of MPEG-1 encoded video for the purposes of enabling the recording/storage of “audio/visual information” on a portable device that may advantageously allow for the storage of an entire movie in your pocket (PocketTV™ article) in a portable manner. Furthermore, such a combination would implicitly provide a means for presenting such information using a larger

display screen [122] for the commonly known advantage of providing the PDA user with a more easily viewable image when the PDA is interconnected to the “set top box” [118] based upon a higher screen resolution (HP Jornada 430se provides a maximum of 16-bit video or 65,336 colors) and/or enabling easier viewing for additional/multiple user so as to share viewing the recorded content given the larger screen image.

Taken in combination, the combined teachings disclose a computer / “set top box” [118] and “handheld computing device” or PDA that are operable to interchange information and display “audio/visual information” on the “output device” [122]. However, the reference does not explicitly disclose nor preclude that the “handheld computing device” is further configured to facilitate remote control type functions. The Huang et al. reference discloses the particular usage of a “handheld computing device” or PDA that is operable to “receive a user command from a user” and “translate the user command into a command signal” so as to “control one or more of the STBs using the command signal” (Col 6, Lines 16-31; Col 7, Lines 43-58). Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the “handheld computing device” of the combined teachings for the purpose of utilizing a PDA as a platform for a remote control that advantageously facilitates added flexibility and functionality (Huang et al.: Col 3, Line 51 – Col 4, Line 21).

Claims 47 and 48 are rejected as previous set forth in the rejection of claim 35. With respect to the differences, the aforementioned combined references do not explicitly disclose the particularly claimed scenario wherein a “first of one or more hand held computing devices” is operable to interact with a STB (Claim 47) such that “the first hand held

computing device and second hand held computing device are different handheld computing devices". In response to the examiner's previous objection pertaining to the drawings failing to illustrate such a scenario utilizing multiple "handheld computing devices" in conjunction with a single "set top box", the applicant states that such a scenario is a "conventional feature" and as such need not be shown in the Figures (Paper 10, Page 7). Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the invention that the aforementioned combined teachings would be operable to utilize both a "first" and a "second handheld computing device" that are different for the purposes of enabling a viewer to transport and share media with another user with a similar configuration.

Alternatively, it is well known in the art that viewers desire to share recorded media for a number of reasons. The combined references articles suggest the use of a portable "handheld computing device" in which a viewer may take recorded media along with them. One of ordinary skill in the art would recognize that multiple home entertainment systems of the combined references may exist and meet the claimed limitations wherein the "first" and "second handheld computing devices" are "different". Feasibly a viewer with a "first hand held computing device" may "receive audio/visual information" that is "transmitted" to a "first handheld computing device" and "stored". The viewer's friend may own a "second handheld computing device" that "receives" and "stores" a different program. Over afternoon tea, the second viewer may talk about the program that he/she watched last night. Presuming that the first viewer has not viewed the program, the second viewer having ordinary skill in the art and being a polite conversationalist may offer to share the contents of the "second handheld computing device". One having ordinary skill in the art would

subsequently recognize that it would be advantageous to plug the “second handheld computing device” into the first users home entertainment system such that it “receives” and “provides the audio/visual information from the second hand held computing device” to an “output device” [122] such as a television set for the purpose of advantageously providing the video display on a larger screen that is easier to view so as to share the program with the second user.

In consideration of claim 57, as aforementioned, the combined teachings disclose a “handled computing device” such as a PDA that is implicitly operable to “control two or more set top boxes” of similar configuration. As aforementioned, the “handheld computing device”, in light of the combined references, is operable to “receive audio/visual information from a first STB”, “store the received audio/visual information” and subsequently transmit the “stored audio/visual information to a second STB for display on the output device”.

In consideration of claims 36, 37, 58, and 59, it is known in the art that viewers share recorded media. The combined disclose the use of a portable “handheld computing device” in which a viewer may take recorded media along with them. Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to recognize various usage scenarios for the purpose of sharing and distributing media between users with a similar configuration of home entertainment systems. For example, one of ordinary skill in the art would recognize that given multiple home entertainment systems that a user might record information on their “handheld computer device” for storage and playback on the “same” STB for the purpose of presenting such information using a larger display screen that advantageously provides a higher screen image resolution than that

associated with the PDA (HP Jornada 430se provides a maximum of 16-bit video or 65,336 colors) and/or enables easier viewing for additional/multiple user so as to share viewing the recorded content given the larger screen image. Alternatively, the use of the “same” STB provides the user with the ability to record and advantageously watch the program at a later time. Similarly, in conjunction with the sharing of media, a user of a “handheld computer device” may subsequently share or distribute the media to a “different” STB associated with a friend for the purposes of advantageously enabling the sharing (analogous to sharing a traditional VCR tape) and viewing of the recorded media on a larger display screen associated with a different location.

In consideration of claims 38, 49, and 60, it is notoriously well known in the art to for a VCR to “transmit the audio/visual information . . . in response to the depressing of a signal button” such as the play button. Accordingly, given that the suggestion by PocketTV™ article that the PocketTV™ is a “miniature VCR”, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a “user command” such as that associated with a play button similar to other VCRs in the art for the purpose of providing a means for “transmitting audio/visual information” to the “second STB” [118] for display on the “output device” [122] using an interface with which a user of a VCR is familiar.

In consideration of claims 39 and 61, it would have been obvious to one having ordinary skill in the art at the time of the invention to store the audio/visual information on the “handheld computing device in encrypted form” for the purpose of limiting the distribution and subsequent playback of the record media to individuals per the media terms of use.

In consideration of claims 40, 41, 50, 51, 62, and 66, the Huang et al. reference discloses the particular usage of “wireless transmission” to communicate with the “one or more of the STBs” (Col 5, Lines 15-21). A PDA such as the HP Jordana 430/430se is operable to communicate via both “wireless” and “wired” means. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further utilize “wired” means in conjunction with “communications” with the “one or more STBs” associated with audio/video materials for the purpose of utilizing a distribution method that supports a higher data transfer rate needed to support streaming video.

In consideration of claims 42, 52, and 64, the Huang et al. embodiment is “configured to control a video cassette recorder” (Col 5, Lines 22-30). The Schindler et al. reference, further discloses that the computer / “set top box” [118] comprises an “incorporated” video cassette recorder [330] (Col 10, Lines 52-54).

In consideration of claims 43, 53, and 65, the combined references do not explicitly disclose the particular technique for “filtering out desirable information from the broadcast audio/visual information for transmission and storage on the handheld computing device”. As referenced in the PocketTV article, a Palm sized device may comprise 64 MB of memory which is operable to store more than one hour of audio/visual information (Para. 2). Accordingly, it would have been obvious to one having ordinary skill in the art to “filter out desirable information from the broadcast audio/visual information” do so for the purpose of utilizing the limited storage capacity to store “desired” material as opposed to undesirable material. It is unclear as to why one would be motivated to record program material for which the user has no interest.

In consideration of claims 44, 54, and 66, the combined references do not explicitly disclose that the “audio/visual information” is transmitted over a “constant period interval”. It would have been obvious to one having ordinary skill in the art at the time the invention was made to transmit information over a “constant periodic interval” since it was known in the art that data such as wireless streamed video is transmitted at a “constant periodic interval” of 100 Mbit/sec or higher per the PocketTV article. Furthermore, the IrDA compliant transceivers such as that associated with the HP Jornada 430/430se transmit information at a “constant period interval” from 9600 b/s with primary speed/cost steps of 115 kb/s and maximum speed up to 4 Mb/s.

In consideration of claims 45, 55, and 67, the “audio/visual information” is “transmitted from one of the STBs to the handheld computing device only when an amount of the audio/visual information exceeds a threshold” such that information is only transmitted when information is available. Alternatively, given that the embodiment is operable to communicate via both “wireless” and “wired” means, it would have been obvious to one having ordinary skill in the art that information would be transmitted via the “wired” means if the data transfer rate exceeds 100 Mbit/sec since such a transfer rate is not supported in conjunction with wireless distribution as taught by the PocketTV article.

In consideration of claims 46, 56, and 68, as aforementioned, it would have been obvious to one having ordinary skill in the art at the time the invention was made to “transmit” the “audio/visual information . . . from one of the STBs to the handheld computing device when requested by the handheld computing device” for the purpose of providing a means by which

the user may control and specify the particular information to be stored on the “handheld computing device”.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as follows. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objections made.

- The Minett (EP 710017 A2) reference provides evidence that it is commonly known to advantageously display an image derived on a PDA onto a larger screen.
- The Croy et al. (US Pat No. 6,476,825) reference provides evidence that it is commonly known to advantageously to share an image on a small screen onto a large screen for ease of viewing.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Beliveau whose telephone number is 703-305-4907. The examiner can normally be reached on Monday-Friday from 9:00 a.m. - 6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703-305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SEB
September 10, 2004



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